

is such that in a cross-section of the polymer matrix surrounded rubber nodules at least 90% of the total area occupied by the nodules corresponds to capsules having a diameter ranging from 0.1 to 1.0 μm , or else

is such that it comprises multi-occlusion nodules and is such that in one of its sections

20 to 60% of the total area occupied by the particles corresponds to particles having a diameter ranging from 0.1 to 1 μm ,

5 to 20% of the total area occupied by the particles corresponds to particles having a diameter ranging from 1 to 1.6 μm , and

20 to 75% of the total area occupied by the particles corresponds to particles having a diameter of greater than 1.6 μm ,

said step being such that:

-if (SFR) represents the number of moles of stable free radical in the polymerization mixture,

-if F_{SFR} represents the functionality of the stable free radical, i.e. the number of sites on the same molecule of stable free radical having the stable free radical state,

-if (INIT) represents the number of moles of polymerization initiator in the polymerization mixture before phase inversion, and

-if F_{INIT} represents the functionality of the initiator introduced before phase inversion, i.e. the number of sites having the free radical state that each molecule of initiator is capable of generating, then:

$$0.05 < \frac{F_{\text{SFR}} \times (\text{SFR})}{F_{\text{INIT}} \times (\text{INIT})} < 1.$$

12. (Twice Amended) Process according to claim 1, characterized in that:

-in the 0.1 to 1 μm size range, more than 95% of the particles have the salami or capsule morphology,

-in the 1 to 1.6 μm size range, more than 95% of the particles have the onion or salami morphology, and

-in the greater than 1.6 μm size range, more than 95% of the particles have the salami morphology.

13. (Twice Amended) Process according to claim 1, characterized in that:

-in the 0.1 to 1 μm size range, more than 95% of the particles have the capsule or onion or labyrinth morphology,

-in the 1 to 1.6 μm size range, more than 95% of the particles have the onion or labyrinth morphology, and

-in the greater than 1.6 μm size range, more than 95% of the particles have the labyrinth morphology.

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14. (Twice Amended) Process according to claim 1, characterized in that the distribution of the diameters of nodules is bimodal.

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18. (Twice Amended) Process according to claim 1, characterized in that the composition is such that, in one of its cross-sections, at least 90% of the total area occupied by the particles corresponds to capsules having a diameter.

34. (Twice Amended) A composition capable of being obtained by the process of one of claims 1-10 or 12-33.

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35 (Twice Amended) Composition according to claim 34 comprising a stable free radical which is in a free form or in a form linked to a polymer chain by a covalent bond, comprising a matrix of vinylaromatic polymer surrounding rubber nodules, characterized in that the composition comprises multi-occlusion nodules and is such that, in one of its cross-sections,

-20 to 60% of the total area occupied by the particles corresponds to particles having a diameter ranging from 0.1 to 1 μm ,

5 to 20% of the total area occupied by the particles corresponds to particles having a diameter ranging from 1 to 1.6 μm , and

20 to 75% of the total area occupied by the particles corresponds to particles having a diameter of greater than 1.6 μm .

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38. (Twice Amended) Composition according to one of Claims 34-37, characterized in that the distribution of the diameters of nodules is bimodal.

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42. (Twice Amended) Composition according to Claim 34, characterized in that the composition is such that, in one of its cross-sections, at least 90% of the total area occupied by the particles corresponds to capsules having a diameter ranging from 0.1 to 1 μm .

A marked-up version of the above amended claims pursuant to 37 C.F.R. § 1.121(c)(1)(ii) is attached for the Examiner's review in Appendix A.